

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-16. (*canceled*)

17. (*currently amended*) The product acquisition and transport system as claimed in claim ~~16~~ 21, wherein the elevator cup detects a presence of a dispensed product in the elevator cup.

18. (*original*) The product acquisition and transport system as claimed in claim 17, wherein the elevator cup is open on one side.

19. (*currently amended*) The product acquisition and transport system as claimed in claim ~~16~~ 21, wherein the first tension element and the second tension element are one of a belt, a chain and a cable.

20. (*currently amended*) The product acquisition and transport system as claimed in claim ~~16~~ 21, ~~wherein the rail is slidable along~~ further comprising a vertical guide rail at each end of the rail, wherein the rail is slidable along the vertical guide rail.

21. ~~(currently amended) The product acquisition and transport system as claimed in claim 16~~ A product acquisition and transport system for a vending machine, said product acquisition and transport system comprising:

an elevator cup for receipt of product from a product separation and selection tray system of the vending machine,

a rail guiding horizontal movement of the elevator cup,

a first drive assembly for moving the elevator cup horizontally, said first drive assembly including a first drive motor fixed in location with respect to the vending machine and a first tension element driven by the first drive motor, the first tension element being connected to the elevator cup for moving the elevator cup laterally along a horizontal axis, and

a second drive assembly for moving the rail vertically, the second drive assembly including a second drive motor fixed in location with respect to the vending machine and a second tension element driven by the second drive motor, the second tension element being connected to the rail for moving the rail vertically along a vertical axis so that the elevator cup is moved horizontally with respect to the product to be dispensed in the vending machine by the first drive assembly and the elevator cup is moved vertically with respect to the product to be dispensed in the vending machine when the rail is moved vertically by the second drive assembly,

wherein the elevator cup is pivotally mounted on the rail for release of product from the elevator cup to a delivery port.

22. *(original)* The product acquisition and transport system as claimed in claim 21, wherein the elevator cup is pivotal to an angle of approximately 45°.

23. *(currently amended)* ~~The product acquisition and transport system as claimed in claim 16~~ A product acquisition and transport system for a vending machine, said product acquisition and transport system comprising:

an elevator cup for receipt of product from a product separation and selection tray system of the vending machine,

a rail guiding horizontal movement of the elevator cup,

a first drive assembly for moving the elevator cup horizontally, said first drive assembly including a first drive motor fixed in location with respect to the vending machine and a first tension element driven by the first drive motor, the first tension element being connected to the elevator cup for moving the elevator cup laterally along a horizontal axis,
and

a second drive assembly for moving the rail vertically, the second drive assembly including a second drive motor fixed in location with respect to the vending machine and a second tension element driven by the second drive motor, the second tension element being connected to the rail for moving the rail vertically along a vertical axis so that the elevator cup is moved horizontally with respect to the product to be dispensed in the vending machine by the first drive assembly and the elevator cup is moved vertically with respect to the product to be dispensed in the vending machine when the rail is moved vertically by the second drive assembly,

wherein the elevator cup includes a channel for receipt of a lever of a product separation and selection tray system.

24. *(currently amended)* The product acquisition and transport system as claimed in claim ~~16~~ 21, wherein the first and the second drive assembly are located on a movable door of a vending machine.

25. *(original)* The product acquisition and transport system as claimed in claim 24, wherein the movable door includes a clear panel for viewing of contents of the vending machine and viewing movement of the elevator cup and the rail.

26. (original) The product acquisition and transport system as claimed in claim 24, wherein positioning of the elevator cup and the rail are controlled by an input to a keypad of the vending machine.

27. (original) The product acquisition and transport system as claimed in claim 24, wherein a product compartment of the vending machine includes a plurality of removable product separation and selection tray systems.

28. (currently amended) ~~The product acquisition and transport system as claimed in claim 27~~ A product acquisition and transport system for a vending machine, said product acquisition and transport system comprising:

an elevator cup for receipt of product from a product separation and selection tray system of the vending machine,

a rail guiding horizontal movement of the elevator cup,

a first drive assembly for moving the elevator cup horizontally, said first drive assembly including a first drive motor fixed in location with respect to the vending machine and a first tension element driven by the first drive motor, the first tension element being connected to the elevator cup for moving the elevator cup laterally along a horizontal axis,
and

a second drive assembly for moving the rail vertically, the second drive assembly including a second drive motor fixed in location with respect to the vending machine and a second tension element driven by the second drive motor, the second tension element being connected to the rail for moving the rail vertically along a vertical axis so that the elevator cup is moved horizontally with respect to the product to be dispensed in the vending machine by the first drive assembly and the elevator cup is moved vertically with respect to the product to be dispensed in the vending machine when the rail is moved vertically by the second drive assembly,

wherein the first and the second drive assembly are located on a movable door of a vending machine,

wherein a product compartment of the vending machine includes a plurality of removable product separation and selection tray systems, and

wherein each of said removable product separation and selection tray systems includes;

a tray for holding two columns of product to be mounted on a shelf in the vending machine,

a central wall for separating the two columns of product on opposite sides of the wall,

a rotator pivotally mounted on the tray for controlling release of a product from the tray,

a gate pivotally mounted on the tray for restraining a successive product located behind the product released by the rotator, and

a lever projecting from the tray for engagement by a product acquisition device, said lever controlling simultaneous movement of the rotator and the gate for dispersing product from the tray to the product acquisition device.

29. *(currently amended)* ~~The product acquisition and transport system as claimed in claim 16~~ A product acquisition and transport system for a vending machine, said product acquisition and transport system comprising:

an elevator cup for receipt of product from a product separation and selection tray system of the vending machine,

a rail guiding horizontal movement of the elevator cup,

a first drive assembly for moving the elevator cup horizontally, said first drive assembly including a first drive motor fixed in location with respect to the vending machine and a first tension element driven by the first drive motor, the first tension element being connected to the elevator cup for moving the elevator cup laterally along a horizontal axis,
and

a second drive assembly for moving the rail vertically, the second drive assembly including a second drive motor fixed in location with respect to the vending machine and a second tension element driven by the second drive motor, the second tension element being connected to the rail for moving the rail vertically along a vertical axis so that the elevator cup is moved horizontally with respect to the product to be dispensed in the vending machine by the first drive assembly and the elevator cup is moved vertically with respect to the product to be dispensed in the vending machine when the rail is moved vertically by the second drive assembly,

wherein said elevator cup includes an arcuate slot for guiding pivotal movement of said elevator cup.

30. ~~(currently amended) The product acquisition and transport system as claimed in claim 16~~ A product acquisition and transport system for a vending machine, said product acquisition and transport system comprising

an elevator cup for receipt of product from a product separation and selection tray system of the vending machine,

a rail guiding horizontal movement of the elevator cup,

a first drive assembly for moving the elevator cup horizontally, said first drive assembly including a first drive motor fixed in location with respect to the vending machine and a first tension element driven by the first drive motor, the first tension element being connected to the elevator cup for moving the elevator cup laterally along a horizontal axis, and

a second drive assembly for moving the rail vertically, the second drive assembly including a second drive motor fixed in location with respect to the vending machine and a second tension element driven by the second drive motor, the second tension element being connected to the rail for moving the rail vertically along a vertical axis so that the elevator cup is moved horizontally with respect to the product to be dispensed in the vending machine by the first drive assembly and the elevator cup is moved vertically with respect to the product to be dispensed in the vending machine when the rail is moved vertically by the second drive assembly,

wherein a portion of said elevator cup engages a port latch of a delivery door for opening of the delivery door during vertical movement of the elevator cup to expose a delivery window.

31. (original) The product acquisition and transport system as claimed in claim 30, wherein said delivery door blocks access to the delivery window and a delivery box for receiving product dispensed from the elevator cup.

32-42. (*canceled*)